

REMARKS

Favorable reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action are respectfully requested in view of the foregoing amendments and the following remarks.

Claim Status

Claims 1 through 23 remain pending in the application. Claims 1 and 13 have been amended. Claims 1 and 13 are the only independent claims pending in the application.

Rejections

Claims 1, 5, and 12 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,163,663 (Shinohara, et al.). Claims 2 and 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. as applied to Claim 1 in view of Japanese Patent Document No. 2002-278262. Claims 4, 7, 8, 13, 16, 18, 19, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. in view of U.S. Patent Application Publication No. 2003/0152856 (Mizoe, et al.). Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. in view of U.S. Patent No. 6,391,511 (Okamoto, et al.). Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. and Mizoe, et al. in view of Okamoto, et al. Claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. in view of U.S. Patent Application Publication No. 2004/0157735 (Hare). Claims 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. and Mizoe, et al. in view of Hare. Claim 11 is rejected under 35 U.S.C. §

103(a) s being unpatentable over Shinohara, et al. in view of U.S. Patent No. 6,856,151 (Naka, et al.). Claims 14 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. and Mizoe, et al. in view of Japanese Patent Document No. 2002-278262. Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, 0et al. and Mizoe, et al. in view of Naka, et al. Claims 1 through 3 are newly rejected under 35 U.S.C. § 103(a) as being unpatentable over the Japanese document '262 document in view of Shinohara, et al. Claims 4 and 13 are newly rejected under 35 U.S.C. § 103(a) as being unpatentable over the Japanese document '262 in view of Shinohara, et al. and Mizoe, et al.

Response to Rejections

In response, while not conceding the propriety of the rejections, independent Claims 1 and 13 have been amended. Applicants submit that as amended, these claims are allowable for the following reasons.

Amended independent Claims 1 and 13 now recite the concept that a lubricant of opposite charge polarity from developer is provided in a contact portion between developer carrying and regulating members in a state of absence of the developer in the contact portion. In addition, these claims recite that the lubricant's weight average particle size is not more than 1/3 of the weight average particle size of the developer (Claim 1) or is smaller than an arithmetic average roughness Ra value of the developer carrying member's surface (Claim 13).

By this arrangement, the occurrences of image density insufficiency and ghost images upon the beginning of use of the developing device can be avoided.

In contrast, the documents to Shinohara, et al., and Mizoe, et al., and Japanese Patent Document No. 2002-278262 are not understood to disclose or suggest the concept that a lubricant of opposite charge polarity from developer, whose weight average particle size is not more than 1/3 of the weight average particle size of the developer or is smaller than an arithmetic average roughness Ra value of the developer carrying member's surface, is provided in a contact portion between developer carrying and regulating members in a state of absence of the developer in the contact portion, as recited by Claims 1 and 13. And since MPEP § 2142 requires the cited art to disclose or suggest all the claimed features to establish a prima facie case of obviousness, and since these three documents are not understood to disclose or suggest this feature of amended Claims 1 and 13, Applicants respectfully submit that the Office has not yet established a prima facie case of obviousness against amended Claims 1 and 13.

The documents to Shinohara, et al., and Mizoe, et al. are understood to merely teach the application of an external additive to the developer so that such externally-added material is not provided in a contact portion between the developer carrying and regulating members in a state of absence of the developer in the contact portion, contrary to amended Claims 1 and 13. Even if the externally-added material is used, the amount of electric charge of the developer is not at such a proper level upon the beginning of use of the developing device so as to avoid the problems occurrence of image density insufficiency and ghost images. The occurrence of image density insufficiency even in the case that polymer particles are externally added to the toner is described at page 35, lines 9 through 16 of the specification of the present application. The claimed lubricant in the present invention is not effective if it is simply mixed into the developer. Rather, the beneficial

effect is realized by providing the lubricant in the contact portion between the developer carrying member and the developer regulating member in a state of absence of the developer in the contact portion, as recited in amended Claims 1 and 13. Thus, neither of these patents anticipate or by themselves, render amended Claims 1 and 13 obvious.

Applicants note that Japanese Laid-open Patent Application 2002-278262, which is discussed at page 4, lines 17 through 27 of the specification, is understood to disclose coating a developing sleeve with the effect that a lubricant is provided in a contact portion between a developer carrying member and a developer regulating member before the developer is carried on the developer carrying member. However, the combination of this Japanese patent document with Shinohara, et al. is untenable since Shinohara, et al. discloses an externally-added material. More specifically, since the documents to Shinohara, et al., and Mizoe, et al. are understood to relate to an apparatus that uses external material only with developer, while Japanese Patent Document No. 2002-278262 relates to a significantly different type of apparatus that uses lubricant “in a state of no developer existing yet”, the skilled artisan would not look to the external material that is used only with developer of Shinohara, et al., and Mizoe, et al. to improve the lubricant used “in a state of no developer existing yet” described in Japanese Patent Document No. 2002-278262. For this reason, the Office has not established the required motivation to combine the art to produce the invention of amended Claims 1 and 13, as required by MPEP § 2142.

For these reasons, Applicants respectfully request that the anticipation and obviousness rejections of Claims 1 and 13 be withdrawn.

Claims 2 through 12 and 14 through 23 depend either directly or indirectly from one of Claims 1 and 13 and are allowable by virtue of their dependency and in their own right for further defining Applicants' invention. Individual consideration of the dependent claims is respectfully requested.

Conclusion

In view of the above amendments and remarks, the application is now in allowable form. Therefore, early passage to issue is respectfully solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,

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